CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 96-156
NPDES NO. CA0030040

WASTE DISCHARGE REQUIREMENT FOR:

PEGASUS INCORPORATED
MARE ISLAND
SOLANO COUNTY

U.S. NAVY
ENGINEERING FIELD ACTIVITY-CARETAKER SITE OFFICE
MARE ISLAND
SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Pegasus Incorporated, hereinafter called the discharger, by application dated March 8, 1996 has applied for issuance of waste discharge requirements and a permit to discharge waste into Mare Island Strait under the National Pollutant Discharge Elimination System (NPDES). By a letter dated October 10, 1996, Pegasus stated that "all water except the initial water used to flood the dry docks will be discharged to the Vallejo Sanitation District." This is a modification of the March 8, 1996 application.

2. **Site Location:** The site is located at 1326 California Ave. in Mare Island. It was formerly known as Mare Island Dry Dock #2 and Dry Dock #3. The site is immediately adjacent to Mare Island Strait.

3. The effluent limit for copper referenced in Finding #4 is based on 4.9 µg/l copper criterion as an interpretation of the narrative toxicity objective in the Basin Plan, based on best professional judgement. From a technical standpoint, 4.9 µg/l is currently the best available criterion that is protective of the most sensitive designated use of San Francisco Bay marine waters with respect to copper: habitat for aquatic organisms. The criterion is based on the Regional Board's study to develop a site-specific objective for copper, which employed the "water effect ratio" approach developed by the USEPA. This approach provides a measure of the binding capacity of natural waters (dependent on particulate matter) relative to the binding capacity of reference waters (filtered oceanic water). The study and associated staff analysis are described in a September 25, 1992, Board staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay." All other effluent limits in Tables I and II of Finding #4 are those established in the Basin Plan.

4. On October 2, 1996, Regional Board staff conducted a baseline sampling at Dry Dock #2 and #3. The results are as follows:

Table I
Dry Dock #2 Liquid Sampling Result

Constituent	Basin Plan/BPJ Effluent Limit (ug/l)	South West Corner Groundwater Seepage		North West Corner Sump Water	
		Sampling Result (ug/l)	Percent Exceedance	Sampling Result (ug/l)	Percent Exceedance
Cadmium	10	1	None	16	60 %(1)
Chromium	11	5	None	24	54 %(1)
Copper	4.9	87	1,676 %(1)	72	1,369 %(1)
Lead	5.6	32	471 %(1)	9	61 %(1)
Nickel	7.1	13	83 %(1)	9	27 %(1)
Zinc	58	290	400 %(1)	90	55 %(1)

Table II
Dry Dock #3 Liquid Sampling Result

Constituent	Basin Plan/BPJ Effluent Limit (ug/l)	South Side Groundwater Seepage		North Side Sump Water	
		Sampling Result (ug/l)	Percent Exceedance	Sampling Result (ug/l)	Percent Exceedance
Cadmium	10	2	None	1	None
Chromium	11	4	None	3	None
Copper	4.9	170	3,369 %(1)	22	349 %(1)
Lead	5.6	42	650 %(1)	9	61 %(1)
Nickel	7.1	35	393 %(1)	6	None
Zinc	58	30	None	30	None

Footnotes for Table I and II:

(1) The Calculation is as follows:

$$\text{Percent Exceedance} = \frac{(\text{Sampling Result} - \text{Basin Plan/BPJ})X100}{\text{Basin Plan/BPJ Effluent Limit}}$$

5. U.S. Navy conducted ship repair operations at these dry docks between 1940 and 1995. Since Pegasus was not in operation prior to October 2, 1996, Pegasus did not contribute any waste into the dry docks prior to this date. Wastewater sources such as contaminated stormwater, infiltrating ground water, and valve and sluice gate leakage from surrounding Navy properties continuously flow into the dry docks. The flows are continuous and will be present when Pegasus operates the dry docks. They could not be segregated from Pegasus's normal operational wastes.

6. **Named Dischargers:** Pegasus Incorporated operates the facility. Thus, Pegasus is named as a primary discharger.

   This facility and the underlying property are owned by the U.S. Navy, who leased this facility to the City of Vallejo who in turn leased it to Pegasus. The U. S. Navy is named as the secondary discharger since U.S. Navy's wastes from prior ship repair operations will commingle with Pegasus's waste and be part of the discharge that is subject to this permit.

   The U.S. Navy will be responsible for compliance with this order only if the Board or Executive Officer finds that Pegasus has failed to comply with the requirements of this Order and the U.S. Navy has been given notice of the lack of compliance and sixty days to obtain compliance by Pegasus.

FACILITY DESCRIPTION

7. This facility is used for the dismantling of vessels. The process varies by the type of vessel dismantled and may include removal of hazardous materials such as PCBs, asbestos, and paint.

8. Discharger dismantles vessels in a graving dock type dry dock. The dismantling process will start with pier side surveying for hazardous material and initial cutting and metals removal. The ship is then pulled into the dry dock for the remaining dismantling process. Once inside the dry dock, catches will be placed beneath the cutting area and the ship will be dismantled deck by deck commencing with the top deck. During the cutting process, the metal cutting saws will be equipped with a vacuum device in order to retain as many metal particles as possible. Each deck will be cut in a fashion that all remaining particulate from the process will be contained in the lower deck which will be vacuumed and cleaned. After the ship has been completely dismantled, the drop cloth will be vacuumed, and disposed.

DISCHARGE DESCRIPTION

9. The discharge consists of up to 30 million gallons per day (mgd) of Napa River water used to carry ships in and out of dry docks. There is no treatment prior to discharge.

Wastewater is discharged into Mare Island Strait. In addition to the Napa River water, process water used in the ship dismantling process, seepage water from the dry dock walls, seepage water from the caisson, and stormwater from certain portions of the site will also be collected in the dry dock sumps. This water will not come in contact with the Napa River water regulated by this permit. This water is discharged to the Vallejo Sanitation and Flood Control District's sewage treatment plant through a separate sewer connection.

10. The wastes produced from the discharger's operations consist of the following:

Waste 001 is an intermittent discharge used to carry the ships into Dry Dock No.2 (17.8 million gallons). This discharge can become contaminated from contact with residual particulate from the ship dismantling process which remain on the floor of the dry dock after cleanup. The abrasive may contain decaying marine organisms, heavy metals, tributyltin, PCBs, toxic paint residues, oil and grease, and other materials. The residual particulate may come in contact with Napa River water when the dry dock is flooded to accommodate another vessel.

Waste 002 is an intermittent discharge used to carry ships into Dry Dock No. 3 (19.5 million gallons). This discharge can become contaminated from contact with residual particulate from the ship dismantling process, which remain on the floor of the dry dock after cleanup. The particulates may contain decaying marine organisms, heavy metals, tributyltin, PCBs, toxic paint residues, oil and grease, and other materials. The residual particulate may come in contact with Napa River water when the dry dock is flooded to accommodate another vessel.

APPLICABLE PLANS, POLICIES AND REGULATIONS

11. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (State Board) and the Office of Administrative Law on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface and ground waters.

12. Pursuant to 40 CFR 122.44, "Establishing Limitations, Standards, and Other Permit conditions" NPDES permit should also include toxic pollutant limitations if the discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct. This permit may be modified prior to the expiration date, pursuant to 40 CFR 122.62 and 124.5, to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the monitoring program included as part of this Order.

BENEFICIAL USES

13. The beneficial uses of San Pablo Bay and contiguous water bodies are:
    a. Agricultural Supply
    b. Cold Freshwater Habitat
    c. Ocean, Commercial, and Sport Fishing
    d. Estuarine Habitat
    e. Industrial Service Supply
    f. Fish Migration
    g. Municipal and Domestic Supply
    h. Navigation
    I. Preservation of Rare and Endangered Species
    j. Water Contact Recreation
    k. Noncontact Water Recreation
    l. Shellfish Harvesting
    m. Fish Spawning
    n. Warm Freshwater Habitat
    o. Wildlife Habitat

BASIS FOR REQUIREMENTS

14. The Basin Plan establishes a narrative objective for acute and chronic toxicity in the Bay. In part, it states that "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. Detrimental responses include but are not limited to, decreased growth rate and decreased reproductive success of resident or indicator species...."

15. Receiving water limitations in this Order are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, *Quality Criteria for Water* (EPA/5-86-001, 1986; Gold Book), applicable Federal Regulations (40CFR Parts 122 through 131), and best professional judgement.

16. Effluent limits for TSS, BOD, settleable matter, oil & grease, arsenic, cadmium, chromium, copper, cyanide, lead, mercury, nickel, silver, zinc, phenols, PCB, and tributyltin are not included in this Order. The basis for not including these limits in this order is that the discharges of these pollutants by the discharger do not pose a reasonable potential to cause or contribute to an excursion above any numeric or narrative water quality objective. This conclusion is based on consideration of ambient receiving water data. The receiving water data relied upon are contained in Annual Report for San Francisco Bay Estuary Regional Monitoring Program for Trace Substances(RMP) (1993 and 1994).

17. The general quality of this discharge based on data presented in the 1993 and 1994 RMP for station BD50 - Napa Station is as follows (all values except mercury are dissolved):

	Average
Arsenic (ug/l)	2.13
Cadmium (ug/l)	0.21
Chromium (ug/l)	0.31
Copper (ug/l)	2.26
Cyanide(ug/l)	1
Lead (ug/l)	0.039
Mercury* (ug/l)	0.021
Nickel (ug/l)	2.62
Silver (ug/l)	0.002
Zinc (ug/l)	1.05

* This is a total value

18. The discharger takes in Napa River water in ambient condition and discharges the water within twenty-four hours, with only the addition of residual particulate from ship dismantling process and contaminated stormwater, infiltrating groundwater and valve and sluice gate leakage. Even with this addition of pollutants, the quality of the discharges from E001 and E002 will be similar to the ambient water quality condition in the Mare Island Strait. The ambient water quality data consistently show levels below basin plan objectives. Monitoring for these constituents is required to ensure there is no reasonable potential to cause or contribute to an excursion above any numeric or narrative water quality objective when Pegasus starts operation. A list of recommended detection limits is also included to ensure meaningful monitoring results. A reopener provision is part of this Order that requires the discharger to notify the Board of material changes in its manufacturing and treatment processes and that would allow the Board to amend the permit as appropriate.

CEQA AND PUBLIC NOTICE OF ACTION

19. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

20. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

21. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Direct discharge of domestic sanitary waste to surface waters of the state is prohibited.

2. The direct discharge of particulate and paint residues from the dry dock, ships, or piers, to waters of the State is prohibited.

3. The placement of spent abrasive and paint residue is prohibited in areas where the materials may be washed into waters of the State by stormwater runoff, or by tide or wave action.

4. Discharges of wastewaters, materials, or wastes other than storm water which are not otherwise authorized by this Order, to a storm drain system or waters of the State are prohibited.

5. Floating oil or other floating materials from any activity in quantities sufficient to cause deleterious bottom deposits, turbidity or discoloration in surface waters are prohibited.

6. Discharges of ship ballast water outside of the dry docks are prohibited.

7. Discharge of pressure washing water, boiler drainage water or any process water that is used or accumulated in the dry dock during the dismantling process are prohibited.

8. During a storm event, Pegasus shall not discharge any process water to the sewer systems of Vallejo Sanitation and Flood Control District unless specifically approved by the District.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
   a. Floating, suspended, or deposited microscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	pH	Variation from natural ambient pH by more than 0.5 pH unit.
c.	Un-ionized ammonia	0.025 mg/l as N annual median 0.4 mg/l as N maximum

3. The discharge shall not cause a violation of any applicable water quality objective for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. **Storm Water Pollution Prevention Plan:** Discharger shall update and submit a Stormwater Pollution Prevention Plan (SWPPP) acceptable to the Executive Officer by January 1, 1997. The SWPPP shall comply with the requirements contained in the attached Standard Provisions. Specifically, the SWPPP shall be updated to address all areas contributing storm water discharge from facilities operated by Pegasus. It shall include pollution prevention measures. The

measures may first include a study to determine sources of contaminants, followed by increased frequency of sweeping, cleaning and/or erosion control measures for certain areas. The updated SWPPP shall be implemented by March 1, 1997.

Henceforth, discharger shall evaluate and update annually the SWPPP, or sooner if there is a change in the operation of the facility which may substantially affect the quality of the storm water discharged from the facility. An annual compliance report acceptable to the Executive Officer documenting the progress and problems encountered the previous year shall be submitted on the July 15th of every year. The tasks in the SWPPP shall include photographing the dry docks after first storm event of the year.

2. **Best Management Plan:** Discharger shall update and submit a Best Management Plan (BMP) acceptable to the Executive Officer by December 20, 1996. Specifically, the BMP shall be updated to include the prohibition of ship ballast water discharge outside the dry docks and include the requirement of pressure wash of dry dock floor prior to opening the caisson. It shall also include proper disposal of all wastewater produced by these processes and photographing of the entire dry dock prior to opening the caisson. The updated BMP shall be implemented by January 15, 1997.

   Henceforth, Discharger shall evaluate and update annually the BMP, or sooner if there is a change in the operation of the facility which may substantially affect the quality of the water discharged from the facility. An annual compliance report acceptable to the Executive Officer documenting the progress and problems encountered the previous year shall be submitted on March 15th of every year.

3. **Self-Monitoring Program:** Discharger shall conduct monitoring in accordance with the attached Self-Monitoring Program as adopted by the Board. The Self-Monitoring Program may be amended by the Executive Officer pursuant to 40 CFR 122.62, 122.63, and 124.5.

4. **Permit Reopener:** Pursuant to USEPA regulations 40 CFR 122.44, 122.62, and 124.5, the permit may be modified prior to the expiration date for reasons including

   a. to add effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through the monitoring program included as part of this Order.

5. **Signatory and Certification:** All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).

6. **Notification on Changes:** Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the Discharger must notify the Regional Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin use or manufacture of a pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

7. **Standard Provisions:** This Order includes all items of the attached "Standard Provisions and Reporting Requirements" dated August 1993. In part, these Standard Provisions require submittal of reports on Safeguards to Electric Power Failure, and Spill Prevention and Contingency Plan within 90 days of adoption of this Order.

8. **Permit Expiration:** This Order expires November 20, 2001. Discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

9. **Effective Date of Permit:** This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective on the date of adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance the permit shall not become effective until such objection is withdrawn.

10. **Pretreatment Requirement:** The discharger shall obtain the required pretreatment permit, and meet all pretreatment requirements of Vallejo Sanitation and Flood Control District.

11. **Secondarily-Responsible Discharger:** After being notified by the Executive Officer that the other named discharger has failed to comply with this Order, the U.S. Navy shall try to obtain compliance by Pegasus. If compliance is not achieved 60 days after the receipt of the notification letter, U.S. Navy shall then be responsible for complying with this Order

12. Discharger shall comply with all sections of this Order immediately upon adoption.

13. **Contingency Plan:** Discharger shall submit a Contingency Plan acceptable to the Executive officer by December 20, 1996. In addition, the discharger shall review and update by November 1 each year its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on November 20, 1996.

Loretta K. Barsamian
Executive Officer

Attachments:

Figure 1 - Discharge Locations
Standard Provisions and Reporting Requirements, August 1993
Self Monitoring Program - Part A (8/93), and part B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

PEGASUS INCORPORATED
MARE ISLAND SHIPYARD
VALLEJO, SOLANO COUNTY

AND

U.S. NAVY
ENGINEERING FIELD ACTIVITY
CARETAKER SITE OFFICE
MARE ISLAND
SOLANO COUNTY

NPDES NO. CA0030040
ORDER NO. 96-156

CONSISTS OF

PART A
DATED AUGUST 1993

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

Station	Description
E-001	At a point in the outfall containing Waste 001 between the point of discharge and the point at which all waste tributary to that outfall is present.
E-002	At a point in the outfall containing Waste 002 between the point of discharge and the point at which all waste tributary to that outfall is present.

B. RECEIVING WATERS

Station	Description
C-R	At a point in Mare Island Straight 1000 feet upstream from the discharge point for Waste 001-002.
C-1	At a point in Mare Island Straight directly over the discharge point for Waste 001-002.
C-R2	At a point in Mare Island Straight 1000 feet downstream from the discharge point for Waste 001-002.

A sketch showing the locations of the above sampling stations shall accompany each report.

C. LAND OBSERVATIONS

Station	Description
L-1 thru L-1-'n'	Located along the perimeter levees of the dry dock at equidistant intervals not to exceed 200 feet.
D-1 thru D-1-'n'	The entire floor area of the Dry Dock which is submerged during ship transfers.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis is given in Table I (attached).

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 96-156.

2. Is effective on November 20, 1996.

3. May reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.

Loretta K. Barsamian
Executive Officer

Attachments:

Table I. Schedule for Sampling, Measurements, and Analysis

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	**Recommended Detection Limit**	**E-001 E-002**			**All C Stations**		**All L Stations**	**All D Stations**
Type of Sample		G	C-24	O	G	O	O	O
Flow Rate (mgd)			E					
BOD, 5 day, 20 ^{o}C or COD (mg/l & kg/day)	1 mg/l	E						
Settleable Matter (ml/l-hr)	0.05 ml/l-hr	E						
Oil and Grease		E						
Total Suspended Matter (mg/l & kg/day)	1 mg/l	E						
Toxicity (% survival)(1)		Q						
Ammonia Nitrogen (mg/l & kg/day)		Q						
Turbidity (TU)		E			E			
pH (pH Units)		E			E			
Dissolved Oxygen (mg/l and % Saturation)					M			
Temperature (^{o}C)			E(3)		E			
Apparent color (Color Units)				E		E		
Sulfides (if DO ,5.0 mg/l) Total & Dissolved					E			

Sampling Station	Recommended Detection Limit	E-001 E-002			All C Stations		All L Stations	All D Stations
Type of Sample		G	C-24	O	G	O	O	O
Cadmium (µg/l& kg/day)	5 µg/l	E						
Copper (µg/l & kg/day)	2 µg/l	E						
Lead (µg/l & kg/day)		E						
Mercury (µg/l & kg/day)		E						
Nickel (µg/l & kg/day)		E						
Aluminum (µg/l & kg/day)		E						
Arsenic (µg/l & kg/day)	1 µg/l	E						
Chromium (µg/l & kg/day)	5 µg/l	E						
Cyanide (µg/l & kg/day)	5 µg/l	E						
Silver (µg/l & kg/day)	4 µg/l	E						
Zinc (µg/l & kg/day)		E						
Phenols (µg/l & kg/day)		Q						
PCB (µg/l & kg/day)		Q						
Tributyltin (µg/l & kg/day)		E						
Un-ionized Ammonia as N (mg/l)					E			
Total Coliform (MPN/100ml)		E			E			
Chlorinated Hydrocarbons		Y						
All Applicable Standard Observations				E(2)			E(2)	E
Observe for Containment of Runoff				E			E	E

(1) The bioassay test shall be a static renewal test using two test fish species (three-spine stickleback and sanddabs). The discharger may use the Third Edition of the USEPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms until otherwise specified by the Executive Officer.

(2) Prior to the submergence of any portion of a dry dock, adequacy of the cleanliness of areas will be observed, certified and recorded, indicating the dates and times of dry dock use, observations and submergence.

(3) The temperature should be taken at least once ever hour.

LEGEND FOR TABLES

TYPES OF SAMPLES

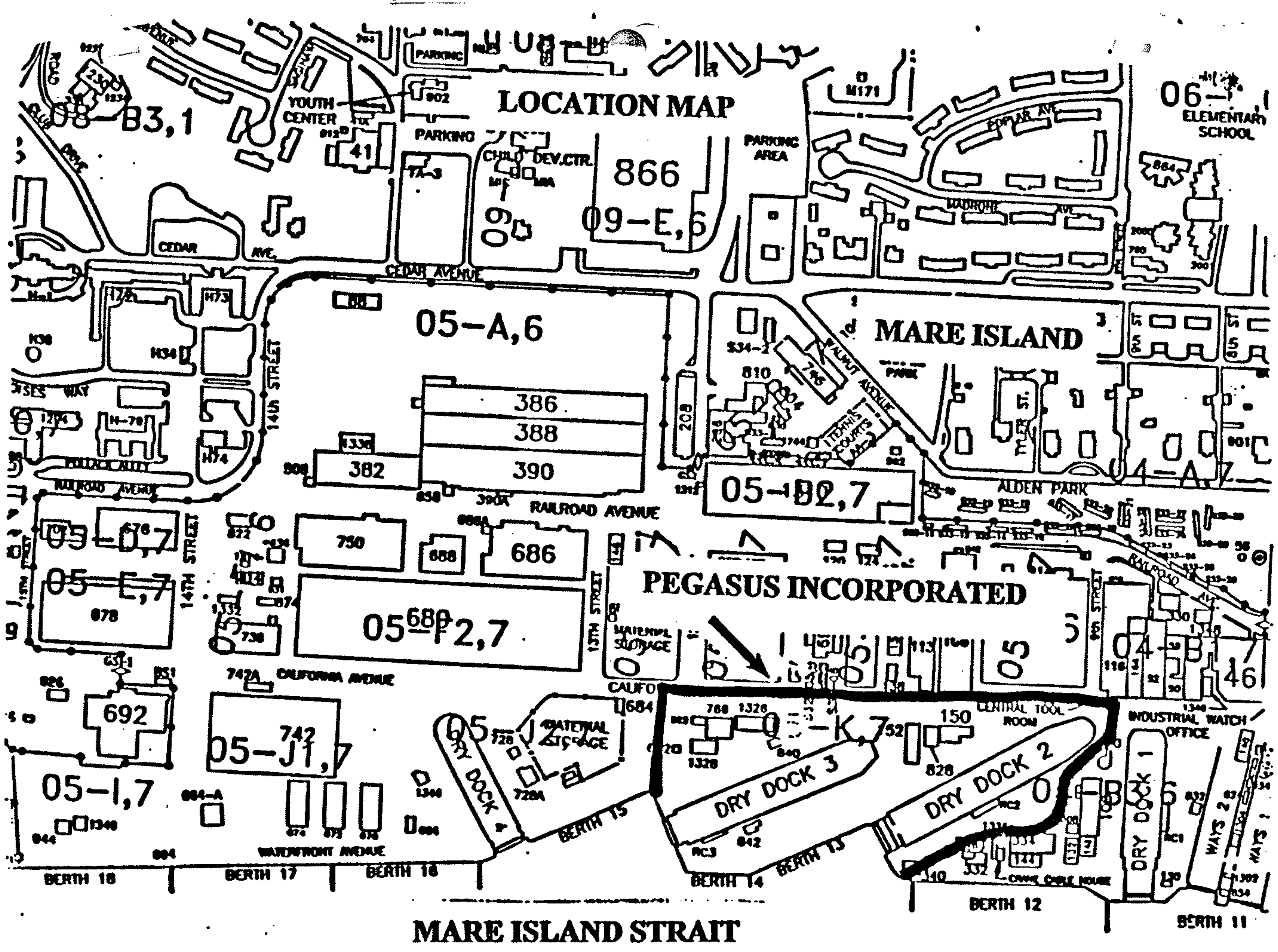
G = grab sample
C-24 = composite sample - 24 hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
E = waste effluent stations
C = receiving water stations
D = treatment facilities perimeter stations
L = basin and/or pond levee stations

FREQUENCY OF SAMPLING

E = each occurrence
W = once each week
M = once each month
Y = once each year
5Y = Once every five years
Q = quarterly, once in March, June, September and December
2/W = 2 days per week
2/M = 2 days per month
2/Y = once in March and once in September
2W = every 2 weeks
3M = every 3 months
Cont = continuous


LOCATION MAP
MARE ISLAND
PEGASUS INCORPORATED
MARE ISLAND STRAIT
YOUTH CENTER
PARKING
CHILD DEV. CTR.
PARKING AREA
ELEMENTARY SCHOOL
CEDAR AVE.
CEDAR AVENUE
14th STREET
14TH STREET
13TH STREET
9th STREET
RAILROAD AVENUE
CALIFORNIA AVENUE
WATERFRONT AVENUE
WALNUT AVENUE
ALDEN PARK
POLLOCK ALLEY
TENNIS COURTS
MATERIAL STORAGE
CENTRAL TOOL ROOM
INDUSTRIAL WATCH OFFICE
CRANE CABLE HOUSE
DRY DOCK 1
DRY DOCK 2
DRY DOCK 3
DRY DOCK 4
WAYS 1
WAYS 2
BERTH 11
BERTH 12
BERTH 13
BERTH 14
BERTH 15
BERTH 16
BERTH 17
BERTH 18
05-A,6
05-I,7
05-J1,7
05-E,7
05-D,7
05-F2,7
05-B2,7
05-K,7
09-E,6
08-B3,1
866
386
388
390
382
686
688
750
678
692
742
208
150
41
810